

# THE OPEN COURT.

A WEEKLY JOURNAL

DEVOTED TO THE RELIGION OF SCIENCE.

No. 377. (VOL. VIII.—46.)

CHICAGO, NOVEMBER 15, 1894.

{ Two Dollars per Year.  
{ Single Copies, 5 Cents.

COPYRIGHT BY THE OPEN COURT PUBLISHING CO.—Reprints are permitted only on condition of giving full credit to Author and Publisher.

## THE PILGRIMAGE OF ANTHONY FROUDE.

BY MONCURE D. CONWAY.

### II.

IN ONE of Froude's works (*A Fortnight in Kerry*) Froude alludes to my visit to him in that remote corner of Ireland. "Fresh from Gravelotte," as he says, and haunted still by that field where I had to pick my way lest I should tread upon the mangled bodies of men, that week was passed as if in some happy Avalon. The horrors faded as if into a faintly remembered nightmare. My host had taken for the summer the beautiful old residence of Lord Lansdowne near Kenmare, a region rich in legend and antiquities. We visited prehistoric mounds and stones, rehearsed ancient Celtic lore, listened to the "keening" of peasants at a funeral, visited a sacred pool whose islet is said to float from one side to another, and saw the pilgrims waiting to be healed when their Bethesda should be so supernaturally stirred. In some of Froude's writings there are indications of something like a personal resentment against Catholicism, which had devoured his beloved Newman, but in that Irish Arcadia, where the old church was in its historical place, and still represented all that was poetic in the folk, nothing could exceed his tenderness towards the humble believers around him. And he was everywhere met, by priest and people, with a friendliness which responded to his neighborly kindness. (Less than two years later, when he lectured in America, the Irish here were raging around him as an enemy of Ireland!) Mr. Froude was indeed one of the most charming of men, personally; in presence, handsome and dignified, he was also gracious, cordial, always more thoughtful of others than himself. I worked for him many years, when he edited Fraser's Magazine, and although our intimacy was terminated by complications connected with his publication of the Carlyle papers, the previous friendship of eighteen years enabled me to detach the real man from the great mistake of his life. Nothing could have persuaded him to print the items in Carlyle's papers which so involved and troubled living persons had he realised the situation, and he was too much hurried by publishers eager to meet a hungry public to digest the materials thoroughly. He suffered griev-

ously from all this, and was prematurely aged. When I saw him at the grave of Tennyson in Westminster Abbey (he was one of the pall-bearers) he appeared to me but the wreck of his former self, though he was not yet seventy. His lectures at Oxford were, however, making a fine impression, and those on "Erasmus," just published, show that he had lost no fibre of intellectual force.

But to return. While rambling and yachting with Froude in Ireland I submitted to him a scheme I had formed for a reprint of the religious romances which grew directly or indirectly out of what is historically known as the "Oxford Movement." The series was to begin with Newman's "Callista; a Tale of the Third Century," and perhaps include Cardinal Wiseman's "Fabiola." More important revivals would be John Sterling's "Arthur Coningsby," and his other novel, "The Onyx Ring," in which Goethe and Carlyle figure as characters. "Oakfield," which Mrs. Lowell quoted much in her "Seed-Grain," Maurice's "Eustace Conway," Charles Kingsley's "Yeast," Smith's "Thorn-dale," might be comprised. But the most important of the series would be Froude's "Shadows of the Clouds," and "The Nemesis of Faith." Froude entered into my plan warmly, and would have assisted me in it, but it failed because no publisher could be found to take any interest in it. Ten years later, when Froude's "Bunyan" appeared, in the "English Men of Letters" series, I could not help reflecting on the spiritual torpor of a world which is still more interested in the Pilgrim's Progress of an extinct dogmatic era, than in the progress of the living pilgrims of the living age, definitely traceable in the works just named.

*Shadows of the Clouds* (by "Zota") appeared in 1847, Froude being in his twenty-ninth year, and for more than five years a Fellow of Exeter College, Oxford. This work, long out of print and found in few libraries, were it now republished, would surely find many eager readers for its literary excellence alone. Indeed it is little occupied with theological matters, though it incidentally deals with moral and philosophical problems. The book contains two tales,— "The Spirit's Trials" and "The Lieutenant's Daughter." In the first of these a graphic description is given of the trials of a boy at an English public school. "For one year, at

least, to all boys, and to some for every year, the life was as hard, and the treatment as barbarous, as that of the negroes in Virginia. What it may be now, I do not know: I am speaking of what it was fifteen years ago." The school portrayed was the Westminster School, of sixty years ago, and the unhappy effects of its whole system on a boy, "Edward Fowler," are traced with consummate skill. The author affirms that every boy will presently deserve the treatment he receives. Edward sinks in character, and is brought into disgrace with his father and family. He recovers heart under a private tutor, and enters the University. But past dissipations have to be paid for: the list of debts cannot be suppressed, and the youth's father turns against him. He had become betrothed to the daughter of a sadly inflexible clergyman,—a vigorously drawn character,—who will not have a son-in-law with escapades in his past. The engagement broken, the youth is precipitated into fresh dissipations. He rises again when he "begins to trust himself and not circumstances."

This story caused considerable flutter, both at Westminster School and at Oxford. The revelations made concerning both were disturbing, all the more because the young author regarded things from a severe moral standpoint. He is not indulgent to vice, but remorseless in tracking it to its sources in bad discipline and evil methods of education. The Masters winced, and though they may have kept a sharper eye on the morals of their colleges, they kept a sharper one on Froude, who was soon discovered under his pseudonym, "Zota." The theologians were induced to do the like by the delicate, if not dangerous, problem raised by the second story,—*"The Lieutenant's Daughter."* This is introduced in a dream, which in realistic impressiveness anticipates Du Maurier's *Peter Ibbetson*. The tale has two endings: in one the daughter becomes a virtuous and happy wife, in the other the same woman becomes a fallen and miserable outcast. These diverse events result from a few years more or less duration of her father's life. It is a tale of the influence of circumstance on character; partly also an illustration of the fact that moral failure is largely due to ignorance and inexperience of the world. Satan and hereditary depravity had already ceased to be a part of Froude's ethical system; nor was the blood of Jesus in his category of cleansing forces. At this time Froude was a devout reader of Emerson and Carlyle, but their influence is hardly visible in his early writings, which are remarkably original. It became evident that a thinker was let loose in Oxford. The atmosphere of the University was already sultry with suspicion, when, in the following year, appeared *The Nemesis of Faith*. But I must reserve further comment on this for a final article.

ON THE PRINCIPLE OF COMPARISON IN PHYSICS.<sup>1</sup>

BY PROF. ERNST MACH.

[CONCLUDED.]

We must admit, that it is not in our power to describe directly every fact, on the moment. Indeed, we should succumb in utter despair if the whole wealth of facts which we come step by step to know, were presented to us all at once. Happily, only detached and unusual features first strike us, and such we bring nearer to ourselves by *comparison* with every-day events. Here the notions of the common speech are first developed. The comparisons then grow more manifold and numerous, the fields of facts compared more extensive, the concepts that make direct description possible, proportionately more general and more abstract.

First we become familiar with the motion of freely falling bodies. The concepts of force, mass, and work are then carried over, with appropriate modifications, to the phenomena of electricity and magnetism. A stream of water is said to have suggested to Fourier the first distinct picture of currents of heat. A special case of vibrations of strings investigated by Taylor, cleared up for him a special case of the conduction of heat. Much in the same way that Daniel Bernoulli and Euler constructed the most diverse forms of vibrations of strings from Taylor's cases, so Fourier constructs out of simple cases of conduction the most multifarious motions of heat; and that method has extended itself over the whole of physics. Ohm forms his conception of the electric current in imitation of Fourier's. The latter, also, adopts Fick's theory of diffusion. In an analogous manner a conception of the magnetic current is developed. All sorts of stationary currents are thus made to exhibit common features, and even the condition of complete equilibrium in an extended medium shares these features with the dynamical condition of equilibrium of a stationary current. Things as remote as the magnetic lines of force of an electric current and the streamlines of a frictionless liquid vortex enter in this way into a peculiar relationship of similarity. The concept of potential, originally enunciated for a restricted province, acquires a wide-reaching applicability. Things as dissimilar as pressure, temperature, and electromotive force, now show points of agreement in relation to ideas derived by definite methods from that concept: viz., fall of pressure, fall of temperature, fall of potential, as also with the further notions of liquid, thermal, and electric strength of current. That relationship between systems of ideas in which the dissimilarity of every two homologous concepts, as well as the agreement in the logical relations

<sup>1</sup>An address delivered before the General Session of the German Association of Naturalists and Physicians, at Vienna, Sept. 24, 1894.

of every two homologous pairs of concepts, is clearly brought to light, is called an *analogy*. It is an effective means of mastering heterogeneous fields of facts in unitary comprehension. The path is plainly shown in which a *universal physical phenomenology* embracing all domains, will be developed.

In the process described we attain for the first time to what is indispensable in the direct description of broad fields of fact—the wide-reaching *abstract concept*. And now I must put a question smacking of the school-master, but unavoidable: What is a concept? Is it a hazy representation, admitting withal of mental visualisation? No. Mental visualisation accompanies it only in the simplest cases, and then merely as an adjunct. Think, for example, of the “coefficient of self-induction,” and seek for its visualised mental image. Or is, perhaps, the concept a mere word? The adoption of this forlorn idea, which has been actually proposed not long since in reputed quarters, would only throw us back a thousand years into the deepest scholasticism. We must therefore reject it.

The solution is not far to seek. We must not think that sensation is a purely passive process. The lowest organisms respond to it with a simple reflex motion, by engulfing the prey which approaches them. In higher organisms the centripetal stimulus encounters in the nervous system obstacles and aids which modify the centrifugal process. In still higher organisms, where prey is pursued and examined, the process in question may go through extensive paths of circular motions before it comes to rest. Our own life, too, is enacted in such processes; all that we call science may be regarded as parts, or middle terms, of such activity.

It will not surprise us now if I say: the definition of a concept, and, when it is very familiar, even its name, is an *impulse* to some accurately determined, often complicated, critical, comparative, or constructive *activity*, the usually sense-perceptive result of which is a term or member of the concept's scope. It matters not whether the concept draws the attention only to one certain sense (as sight) or to a phase of a sense (as color, form), or is the starting point of a complicated action; nor whether the activity in question (chemical, anatomical, and mathematical operations) is muscular or technical, or performed wholly in the imagination, or only intimated. The concept is to the physicist what a musical note is to a piano-player. A trained physicist or mathematician reads a memoir like a musician reads a score. But just as the piano-player must first learn to move his fingers singly and collectively, before he can follow his notes without effort, so the physicist or mathematician must go through a long apprenticeship before he gains control, so to speak, of the manifold delicate innervations

of his muscles and imagination. Think of how frequently the beginner in physics or mathematics performs more, or less, than is required, or of how frequently he conceives things differently from what they are! But if, after having had sufficient discipline, he lights upon the phrase “coefficient of self-induction,” he knows immediately what that term requires of him. Long and thoroughly practised actions, which have their origin in the necessity of comparing and representing facts by other facts, are thus the very kernel of concepts. In fact, positive and philosophical philology both claim to have established that all roots represent concepts and stood originally for muscular activities alone. The slow assent of physicists to Kirchhoff's dictum now becomes intelligible. They best could feel the vast amount of individual labor, theory, and skill required before the ideal of direct description could be realised.

\* \* \*

Suppose, now, the ideal of a given province of facts is reached. Does description accomplish all that the inquirer can ask? In my opinion, it does. Description is a building up of facts in thought, and this building up is, in the experimental sciences, often the condition of true representation. For the physicist, to take a special case, the metrical units are the building-stones, the concepts the directions for building, and the facts the result of the building. Our mental imagery is almost a complete substitute for the fact, and by means of it we can ascertain all the fact's properties. We do not know that worst which we ourselves have made.

People require of science that it should *prophesy*, and Hertz uses that expression in his posthumous *Mechanics*. But, natural as it is, the expression is too narrow. The geologist and the palæontologist, at times the astronomer, and always the historian and the philologist, prophesy, so to speak, *backwards*. The descriptive sciences, like geometry and mathematics, prophesy neither forward or backwards, but seek from given conditions the conditioned. Let us say rather: *Science completes in thought facts that are only partly given*. This is rendered possible by description, for description presupposes the interdependence of the descriptive elements: otherwise nothing would be described.

It is said, description leaves the sense of causality unsatisfied. In fact, many imagine they understand motions better when they picture to themselves the pulling forces; and yet the *accelerations*, the facts, accomplish more, without superfluous additions. I hope that the science of the future will discard the idea of cause and effect, as being formally obscure; and in my feeling that these ideas contain a strong tincture of fetishism, I am certainly not alone. The more proper course is, to regard the abstract determina-



*tive elements of a fact as interdependent*, in a purely logical way, as the mathematician or geometer does. True, by comparison with the will, forces are brought nearer to our feeling; but it may be that ultimately the will itself will be made clearer by comparison with the accelerations of masses.

If we are asked, candidly, when is a fact *clear* to us, we must say "when we can reproduce it by very *simple* and very familiar intellectual operations, such as the construction of accelerations, or the geometrical summations of accelerations, and so forth." The requirement of *simplicity* is of course to the expert a different matter from what it is to the novice. For the first, description by a system of differential equations is sufficient; for the second, a gradual construction out of elementary laws is requisite. The first discerns at once the connexion of the two expositions. Of course, it is not disputed that the *artistic* value of materially equivalent descriptions may not be different.

Most difficult is it to persuade strangers that the great universal laws of physics, such as apply indiscriminately to material, electrical, magnetic, and other systems, are not essentially different from descriptions. As compared with many sciences, physics occupies in this respect a position of vantage that is easily explained. Take, for example, anatomy. As the anatomist in his quest for agreements and differences in animals ascends to ever higher and higher *classifications*, the individual facts that represent the ultimate terms of the system, are still so different that they must be *singly* noted. Think, for example, of the common marks of the Vertebrates, of the class-characters of Mammals and Birds on the one hand and of Fishes on the other, of the double circulation of the blood on the one hand and of the single on the other. In the end, always *isolated* facts remain, which show only a *slight* likeness to one another.

A science still more closely allied to physics, chemistry, is often in the same strait. The abrupt change of the qualitative properties, in all likelihood conditioned by the slight stability of the intermediate states, the remote resemblance of the co-ordinated facts of chemistry render the treatment of its data difficult. Pairs of bodies of different qualitative properties unite in different mass-ratios; but no connexion between the first and the last is to be noted, at first.

Physics, on the other hand, reveals to us wide domains of *qualitatively homogeneous* facts, differing from one another only in the number of equal parts into which their representative marks are divisible, that is, differing only *quantitatively*. Even where we have to deal with qualities (colors and sounds), quantitative characters of those qualities are at our disposal. Here the classification is so simple a task that it rarely impresses us as such, whilst in infinitely fine gradations, in

a *continuum of facts*, our number-system is ready beforehand to follow as far as we wish to go. The co-ordinated facts are here extremely similar and very closely affined, as are also their descriptions which consist in the determination of the numerical measures of one given set of characters from those of a different set by means of familiar mathematical operations—methods of derivation. Thus, the common characteristics of all descriptions can be found here; and with them a succinct, comprehensive description, or a rule for the construction of all single descriptions, is assigned,—and this we call *law*. Well-known examples are the formulæ for freely falling bodies, for projectiles, for central motion, and so forth. If physics apparently accomplishes more by its methods than other sciences, we must remember that in a sense it has presented to it much simpler problems.

The remaining sciences, whose facts also present a physical side, need not be envious of physics for this superiority; for all its acquisitions ultimately redound to their benefit as well. But also in other ways this mutual help shall and must change. Chemistry has advanced very far in making the methods of physics her own. Apart from older attempts, the periodical series of Meyer and Mendelejeff are a brilliant and adequate means of producing an easily surveyed system of facts, which by gradually becoming complete, will take the place almost of a continuum of facts. Further, by the study of solutions, of dissociation, in fact generally of phenomena which present a continuum of cases, the methods of thermodynamics have found entrance into chemistry. Similarly we may hope that, at some future day, a mathematician, letting the fact-continuum of embryology play before his mind, which the palæontologists of the future will supposedly have enriched with more intermediate and derivative forms between Saurian and Bird than the isolated Pterodactyl, Archaeopteryx, Ichthyornis, and so forth, which we now have—that such a mathematician shall transform, by the variation of a few parameters, as in a dissolving view, one form into another, just as we transform one conic section into another.

Reverting now to Kirchhoff's words, we can come to some agreement regarding their import. Nothing can be built without building-stones, mortar, scaffolding, and a builder's skill. Yet certainly the wish is well founded, which will show the complete structure to posterity in its finished form, bereft of unsightly scaffolding. It is the pure logical and æsthetic sense of the mathematician that speaks out of Kirchhoff's words. Modern expositions of physics aspire after his ideal; that, too, is intelligible. But it would be a poor didactic trick, for one whose business it was to train architects, to say: "Here is a stately edifice; if thou wouldst really build, go thou and do likewise.

The barriers between the special sciences, which make division of work and concentration possible, but which after all affect us as cold and conventional restrictions, will gradually disappear. Bridge upon bridge is thrown over the gaps. Contents and methods, even of the remotest branches, are compared. When the Congress of Natural Scientists shall meet a hundred years hence, we may expect that they will represent a unity in a higher sense than is possible to-day, not in sentiment and aim alone, but in method also. In the meantime, this great change will be helped by our keeping constantly before our minds the fact of the intrinsic relationship of all research, which Kirchhoff characterised with such classical simplicity.

### THE PHILOSOPHY OF A HUMORIST.

[CONTINUED.]

#### II. EXISTENCES THAT ARE IN PART.

Having accompanied Wilhelm Busch's sagacious dreamer through the land of pure forms, let us follow him now into a more real realm; but here still he finds existence in parts only.

Edward first visits the community of heads. These live in nests in a high mediæval place, having behind their ears wings which are an appropriate adaptation of their neck muscles. Some sit around marshes; they are the water-heads. They blink drowsily with their eyes and let the sun shine into their mouths. Then, there are the head-strong who possess the vanity of their own opinion in spite of argument, wrangling and quarrelling in the air. Almost every one of them had bruises, black and blue. They live on wind and earn their living as stump-orators and singers in dime-museums.

Lower down, on a mountain-range, hands were living as scribblers, scrubbers, stocking-knitters, stringed-instrument musicians, and other trades. The feet are at home in the valley.

Leaving the land of separate limbs our tramping dreamer visits a village and describes its still life. There were three merry flies swarming over a pond, three joyous little fish caught them. A moment later three ducks came along; each duck snatched a fish and swallowed it. The farmer's good-natured wife appeared in the door of the house and enticed the three ducks with a few crumbs of bread into the kitchen. Then she seized them and cut off their throats, but being hasty she cut her finger at the same time. The hatchet was rusty and the finger began to swell. There were symptoms of blood poisoning; the doctor came. He understood the case. He cut off her finger, but it wouldn't do; he cut off her arm, but it wouldn't do; he cut off her head, but it wouldn't do; he cut off her waist, but it wouldn't do; he cut off her knees, but it wouldn't do; and when he came to her sensitive corns

a shriek was heard and she was dead. The farmer would not be comforted for the doctor's fee was \$53.75. The doctor put the honorarium into his pocket-book and the farmer sighed. The doctor put the pocket-book into his pocket and the farmer fainted upon a chair, staring into emptiness. The doctor was a man of the world. Slowly he rode away, nor began he to trot until he was out of sight. He was wholly unaware that his pocket had a hole in it. The disconsolate widower went to the pig-pen and looked at the pigs. There were thirteen of them, each worth \$11.25. His tears began to dry and when he came out again he had become a new man.

Edward now left the farm house and went to one of the neighbors. It was the uncle of the farmer. Having just returned with an unsteady walk from a long sitting at the inn he entered the room where his numerous family expected him with dread. The old man threw his hat upon the ground and shouted "He who takes that hat up will be thrashed; he who lets it lie, will be thrashed, too." He was a very reliable man and he kept his word.

Having witnessed this sad spectacle, the pensive traveller sighs and says: "Alas! my dear reader, how often does fate throw before us his tragic hat, and whatever we do we shall have trouble."

Continuing the story of his travel, our dreamer finds himself confronted by a philosopher whose greatness consists in creating problems where there are none. Edward says: "I went to the neighboring farm. An old thinking man stood in the cow-stable which he had just cleaned, and he closed the barn-shutters. 'Strange,' he said, resting his chin upon the dung-fork. 'Strange, very strange! Indeed, extraordinary! If I close the barn-shutters it grows dark!' And so he stood for a long time and thought and thought. As if there were not worries enough in the world without that! And it was very dark in his mind and also in the cow-stable.

In another farm-house our all-observing dreamer finds the delicate little daughter of the farmer sitting at the piano. There is a knock at the door. "Is your father at home?" asks the man who buys sheep. "No, sir," she replied, in a lady-like way, "papa hauls dung." What a pleasant instance of increasing culture, which still has something of the strong odor of the soil from which it grew!

We pass over a number of pictures of Edward's dream, which show us an incendiary firing his barn; several toppers, one of whom pays the bill with counterfeit money; a broom-maker, who finds the doctor's pocket-book, and, having hidden it in his boot, meets the doctor, who returns on his horse in full speed. "Did you find something?" asked the doctor. "No, sir," the broom-maker says, with composure, and while

the doctor hastens on, thinks to himself, "that will be a lesson to him." In this way a wise man had given to an inexperienced fellow a valuable lesson without bringing him into the painful situation of expressing his thanks—a good deed, which is the more remarkable as he never bragged of it.

Wherever Edward goes he finds the world interesting, not less so than the cultured farmer who met him on the way, and had just been looking at his potatoes, which were doing splendidly. The sun shone through his transparent ears, and he was happy, shouting in ecstasy: "O, how beautiful is the world, how beautiful!"

After some other excursions, Edward visited the temple of science. There he saw the high-minded investigators sitting among their microscopes, retorts, and guinea-pigs. Considering the use, the enhancement, and all the other advantages which mankind owes them, and also their own well-deserved pride, he left their sanctum with suppressed reverence. But he overheard a critic—for flies are everywhere—say to another critic who passed him: "There are numbers in their heads, and bacilli in their hearts. They grind everything to powder—God, spirit, and Shakespeare, and then the broom-guard, those sages who sweep together the offal from the back-doors of centuries."—Here the critic interrupted himself and exclaimed: "Do you see that milk-cart? The billy-goat that draws it looks as proud as if he had produced the milk himself."

In the art-museum the old artists had been newly varnished. Among the new artists were the naturalists, one of whom protested that he preferred one natural peasant-girl standing knee-deep in the mud to eleven thousand embalmed princesses dancing upon wires. "Nature," he began to sing, "nothing but naturrrr!" The other naturalists fell in and Edward joined the chorus. "Naturrrr," he sang "Naturrrr?"

Here the dreamer was poked again by his wife who said: "Dear me, Edward! How terribly you snore!"

Edward did not allow his dream to be disturbed. He saw at the art-museum an old ruffian who looked at the pictures and was morally disgusted with them. His name is The-man-with-the-dirty-spectacles, for the dirt that he finds he brings with him.

In the world of politics Edward observed that Bismarck had just left the driver's box and resigned the reins of the world. Surely that would create a commotion! But no, the world is like a pot of porridge. If you take the spoon out, and were it the largest, the whole business will close up again, and be as if nothing had happened.

While still moved in thought Edward grew desirous, after having seen so many marvellous and glorious things, to see once a really good man. He said

to himself: "I am not especially anxious to see him, but it is only for the sake of completeness."

Now our dreamer was told that there was a kind philanthropist whose possessions weighed upon him like a burden, and distributing them was his greatest pleasure. Edward went to see him.

The philanthropist had just gathered up from the street five tramps. "Brethren," he said, mildly, "make yourselves at home. We will all be equal." The tramps were satisfied. They ate together, they drank together, they smoked together, and they decided that on the next morning they would shine their boots together. The case was so remarkable that Edward stayed until the next morning. On the next morning the six gentlemen met at the breakfast-table, and when the philanthropist saw his five brethren decently dressed in good clothes like himself a tear was in his eye, and, shaking hands with them, he expressed his joy that every one was now satisfied. Then one of them, formerly a mason, cleared his throat and said: "Well, that is so; however, as you, my brother, have had so much more spare time for being satisfied than we, it would be but reasonable that we should now have a correspondingly better time than you." The philanthropist was a just man, and another tear came to his eye. He nodded his consent. So everybody took his mocha, except the philanthropist; everybody took a cognac, except the philanthropist; everybody smoked his Havana, except the philanthropist; and after breakfast no one shined the shoes except the philanthropist.

When he now saw his five brethren better dressed than himself, a third tear stood in his eye, and, embracing them, he expressed his joy that at last everybody was satisfied. But the mason again cleared his throat and said: That may be so, but he should now step under the window, for they wanted to spit on his head and see whether their brother was still proud. The philanthropist had a fourth tear in his eye, and he declined. When his five brethren observed that he objected, they seized him by the collar of his coat and made him "walk proudly" as they called it. They carried him down into the hall, whipped him one, two, three times, still keeping him suspended, and at three threw him out of the door of his house into the yard where he frightened a cow; and while the poor fellow was lying in the mud, the four tears which had gathered in his eyes broke out at once and he began to swear. What a disappointment to Edward who now clearly recognised that at bottom the philanthropist was no really good man. He who wants to follow equality through thick and thin must have high boots.

But Edward after all did not in his dream give up finding a good man. He followed a collector who had in his hands a list of names, into a stately residence. The owner gave him a quarter for foreign missions



and a dime for home missions, and having done so, when the collector had left, fell into a dreaming, saying, "I am too good, I am much too good." So much was he overcome with the almost punishable kindness of his heart.

Now Edward was satisfied. He had seen a good man, a man who was even more than good.

Having taken a trip into vacuity in order to see whether the world had an end or not, and having returned along the heavenly axis at the polar star, the restless wanderer returned to our little earth and came to a place where everybody was in a state of indolent happiness. The people had invented great burning-glasses to collect sun-heat sufficient for all the machinery, stoves, lamps, and kitchens that were needed in the country, and in addition enough power for purposes of amusement and everybody was taken care of by the national administration. There were no thieves, for there was no need of stealing. And if somebody on account of weakness of mind took some such thing as a cigar from his neighbor he was treated in an asylum and cured by kindness and benevolent treatment. All troubles were done away with, death alone could not be banished. "That is all very fine," thought Edward, "but are not the stupid people envious when comparing themselves with clever folks, and the ugly with the beautiful?"—"Well," replied one of the people, "formerly it was bad enough and we had much trouble. But now all that is past since the competition gland has been discovered." Then he described that this injurious organ has its seat deep in the brain behind the ear, and its extirpation is obligatory. The success justifies the method. There was not envy, no pride, no ambition; and the good Lord and the ten commandments had become redundant. It was only a pity that all laughter had ceased. True, there were laughing-clubs, but the laughter which they practised was wooden and hypocritical, it was not natural. The genuine joy in manifesting our abilities which make us strong to endure competition could not obtain under these well-regulated conditions. There was a certain soft monotony which it appears even the inhabitants of this country could appreciate only with difficulty, for on almost every tree of their fine parks some one hung who had grown sick of life. The people, to be sure walked through the parks and did not mind, but Edward could not stand it. He left and went to a philosopher.

In the next episode of Edward's dream-experiences Wilhelm Busch ridicules the mechanical world-conception which reduces all processes of the world to matter and motion, forgetful of the fact that in sentiments, thoughts, and in ideal aspirations the material and mechanical aspect of an event is its most unessential feature. Ideas cannot be explained by, or classi-

fied under, the categories of matter and motion. And Busch is right, for in the spiritual world another and more subtle element enters, which, although it appears to a materialistic conception as non-existent, is after all the most important reality of life.

Edward entered the philosopher's study and was courteously received. Three parrots were swinging on perches. The philosopher wore a red cap with a green feather, a gown of mole-skin, pants of stag leather, and slippers of crocodile skin. He had several remarkable curiosities in his collection which he was kind enough to show. The three parrots swung themselves on perches in his study and repeated every word he said. First, the philosopher began, look at this automatic piece of art. It was a crane standing in a dish full of water containing an eel. The philosopher wound the mechanism and the crane bowed down, caught the eel, lifted him up and swallowed him. While still standing in thought as if satisfied, the eel glided out at the next moment from behind, and again with unfailing certainty the long-billed bird caught him, swallowed him, and waited for further consequences. The eel returned to the water by the same way to be devoured again in the same fashion, and thus the circle continued. "This," said the master, "is the circuition of things."

The philosopher now took an insignificant looking utensil from his cabinet. It was a blowing-mill. He dusted it and said with importance: "This, my friend, is the thing-in-itself which before me no one has understood." He pressed a button and the mill began to fan, producing upon Edward a pleasant feeling as if some one was tickling him behind his ears. The philosopher pressed the button a second time and a palatable dinner appeared. He pressed a third time and an agreeable odor arose. He pressed a fourth time and fine music was heard; a fifth time and fire-works began to play. "Thus," the polite host explained, "everything that happens between us and the things is nothing but motion, now quicker, now slower, now in a medium of ether, now of air which may be thicker or thinner."

"But how is it with thoughts?" Edward asked the master. "It is the same with thoughts," replied he. "You will see at once." He put his blowing-mill away and handed me a wind-mill. It was small and built after the pattern of those little instruments which are fastened to cherry-trees in order to keep the sparrows away, only smaller, and with wings of paper. Placing this mill before me he said: "Well, my friend, now think deftly." Edward began to think and thought as much as he could, and the more sturdily he thought the brisker the paper wings of the mill turned round and they clattered so that even an old experienced sparrow would not have dared to approach. "The

more wind the more noise," said the sage explainingly.

"But the joys and the pains of our heart," the inquisitive visitor retorted, "are they nothing but motion also?" "Certainly," the wise man said, "only they turn in the screw fashion." Then he took from his shelf a dainty holder in which horizontally a corkscrew lay, that could be turned by a crank. "Well?" queried Edward, expectantly. "Sit down here," said the philosopher, considerably; "I notice your constitution is a little abnormal. Take a seat here, this is a chair of higher sensitiveness."

It was a softly upholstered easy-chair, and the master approached his visitor with his screw, turning it forward. What a painful sentiment pierced his innermost being. He felt like screaming aloud. It was as if his old great-aunt had died. "Pain is positive," said the master, but now we will turn the screw backwards." The pain disappeared, and an unexpected happiness streamed through Edward's whole system. It was as if the good deceased aunt had left him a fortune of half a million. "Joy is negative," explained the philosopher, and returned the soul-screw to its former place.

Not to exhaust the patience of his host, Edward thought it time to take his leave. But the philosopher said: "One more thing," and conducted him to his desk. There, in a big glass of alcohol, he produced a strange creature, which had great similarity to a rotten pumpkin, with a few fibres which looked like undeveloped limbs. "This," said the sage, "is man as he was a thousand million years ago, before he degenerated into *amphioxus lanceolatus*, from whom we have started up again, so that we can hope in the next future to attain to something extraordinary." "Beautiful he is not," Edward said, disappointedly. "But clever," replied the sage; "I have searched his head. Those doubtful distinctions of here and there, of to-day and the day after to-morrow, which involve us into so many difficulties, did not exist at that time. The question whether twice two is four and everything else remained undecided, and as to the principles of geometry, I can assure you that in those days the crookedest line was the shortest path between two points."

Here the philosopher paused in order to leave his guest time to express his admiration, and to propose further questions.

"My honored sir," Edward said, "may I ask another little question?" He nodded kindly. "What do you think of ethics? What must man do so that he may prosper once for all?"

Without hesitation the sage opened a drawer, took out a flute, put it to his nose, closed the mouth, and, blowing up his cheeks, began to play as adroitly as a skilled canary-bird, that had received the first prize at

the World's Fair. "Understand me? Are you convinced?" he asked, when stopping. "Not quite," Edward said. Then the philosopher began to sing:

"Upon the man who does refuse,  
Treadle dee!  
Our logic, and rejects our views,  
Treadle dee!  
We turn our back to slink away,  
And mind not what he think or say,  
Treadledit!"

Having finished his song, he blew the flute again, turning his head complacently now to this, now to that side. At last he stopped abruptly, replaced the flute in the drawer, and turned his back upon Edward. Without taking further notice of his visitor, the philosopher wrapped his gown tightly around him, and, crouching down on the floor, he crowed like an old Cochinchina rooster, and disappeared in the next room. The parrots crowed also.

Edward for a moment stood aghast and then left the philosopher's study in great haste. P. C.

[TO BE CONCLUDED.]

#### BOOK NOTICES.

*The Century Magazine* for November begins a series of articles on the Life of Napoleon Bonaparte by Prof. William M. Sloane, based upon a study of the original sources, and containing much that is new. After the fashion of *The Century*, it is profusely illustrated, and, so far as Mr. Sloane's studies have appeared, nothing of interest is forgotten. We may add, for those who do not know Prof. Sloane, that he is especially fitted for writing a life of Napoleon, as long sojourns in France have made him familiar with his subject and enabled him to ransack all the archives containing documents bearing on the history of the great Corsican. Born in Richmond, Ohio, in 1850, and a graduate of Columbia College, in 1868, he taught Latin for some time in the Newell Institute at Pittsburgh where his father was pastor of the Presbyterian Church. He studied in Berlin and Leipsic, where in 1876 he took his doctor's degree. In Berlin he was for a time attached to the American legation as private secretary to Mr. Bancroft, who was then writing the tenth volume of the History of the United States, and from whose experience in historical studies the young secretary had ample occasion to profit. In 1883 Mr. Sloane took the chair of Professor of the Philosophy of History at Princeton, and has since visited France several times in the interest of his Napoleonic researches. We may expect that the present series of articles will be the most impartial, the most reliable, and most interesting of all biographies of the great Corsican.

## THE OPEN COURT.

324 DEARBORN STREET,  
CHICAGO, ILLINOIS, POST OFFICE DRAWER F.

E. C. HEGELER, PUBLISHER.

DR. PAUL CARUS, EDITOR

TERMS THROUGHOUT THE POSTAL UNION:  
\$2.00 PER YEAR. \$1.00 FOR SIX MONTHS.

#### CONTENTS OF NO. 377.

THE PILGRIMAGE OF ANTHONY FROUDE. II.	
MONCURE D. CONWAY.....	4287
ON THE PRINCIPLE OF COMPARISON IN PHYSICS. (Concluded.)	
PROF. ERNST MACH.....	4288
THE PHILOSOPHY OF A HUMORIST. II. EDITOR.	4291
BOOK NOTICES.....	4294